



Use of Human Cell Cultures in Vaccine Manufacturing

CDC's responsibility is to ensure that the U.S. population is adequately vaccinated with safe and effective vaccines to prevent sickness, disability and death. The CDC does not manufacture vaccines. The Food and Drug Administration licenses vaccines for use in the United States.

CDC is aware that some, but not all, vaccines are made from human cell-line cultures, and some of these cell lines originated from aborted fetal tissue, obtained from legal abortions in the 1960's. No new fetal tissue is needed to produce cell lines to make these vaccines, now or in the future. Fetal tissue is not used to produce vaccines; cell lines generated from a single fetal tissue source are used--vaccine manufacturers obtain human cell lines from FDA-certified cell banks.

Vaccines work in preventing disease, disability and death, but only when children and adults in a community are adequately vaccinated. In the United States, disease incidence, disability and death from vaccine-preventable diseases have declined dramatically since the development and widespread use of vaccines. For example, in 1964, there were an estimated 20,000 babies born with congenital rubella syndrome (CRS) in the United States. When women contract rubella during early pregnancy, this often causes neurological damage to the unborn child, resulting in the child suffering blindness, deafness and retardation. In 1993, the number of CRS cases was seven, reflecting a 99.9% reduction in this preventable disease since 1964.

In January 1996, CDC, the American Academy of Pediatrics and the American Academy of Family Physicians jointly recommended routine use of varicella vaccine to protect children from chicken pox. In March 1995, this vaccine was licensed for use in the United States by the FDA and was shown to be safe and effective. Widespread use of varicella vaccine--which took more than 20 years for the development, testing, and licensing--can help prevent thousands of children from being hospitalized each year because of complications from chicken pox. Complications include secondary infections such as group A streptococcal infections that can lead to necrotizing fasciitis, multiple organ failure, shock and death. Approximately 100 people in the United States each year die from complications associated with their chicken pox illness.

A community's optimum opportunity to prevent disease, disability, and death through vaccination is obtained only with the widest participation of community members. No vaccine offers immunity to everyone vaccinated. Some people who may elect to be vaccinated will not obtain immunity from the vaccine and will remain susceptible to viruses. However, as more and more members of a population are vaccinated, the odds of the nonimmune person being exposed to the disease goes down. A community needs nearly everyone's participation in the disease prevention effort to protect those people who maybe unable to protect themselves even through vaccination. Health care providers cannot predict which people will not become immune after vaccination. In addition, some children, for medical reasons, cannot be vaccinated and these children must rely on their community members to help protect them from disease exposure by being vaccinated. When vaccination levels go down, disease incidence and deaths go up such as during the U.S. measles epidemic which killed 130 between 1989-91.